

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Non-Final Office Action dated May 13, 2010 has been received and its contents carefully reviewed.

Claim 1 is hereby amended. Claims 16-29 have previously been withdrawn from consideration. Claim 15 has previously been canceled. Accordingly, claims 1-14 are currently pending. Reexamination and reconsideration of the pending claims are respectfully requested.

Claims 1-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Related Art, FIGs. 2 and 3F (hereinafter "APAF") in view of U.S. Patent No. 5,162,933 (hereinafter "Kakuda") and U.S. Patent No. 5,825,437 (hereinafter "Seo"). Applicant respectfully traverses the rejection as being based upon Applicant's Related Art and a reference that neither teach nor suggest the novel combination of features recited by independent claim 1, and hence dependent claims 2-14.

With respect to independent claim 1, Applicant respectfully submits that none of the cited references disclose a claimed combination comprising at least feature of "a plurality of thin film transistors formed on the substrate adjacent to intersections of the gate lines and the data lines, each thin film transistor including a gate electrode, a gate insulation layer, an active layer, an ohmic contact layer, a source electrode, and a drain electrode, the source electrode extended from each of the data lines and overlapping a portion of the gate electrode," "a metal layer formed on an entire surface of each of the data lines and an entire surface of the source electrode, and at peripheral portions of the drain electrode," and "wherein the source electrode is positioned between the ohmic contact layer and the metal layer and *formed of a transparent conductive material selected from a group including indium-tin-oxide, indium-zinc-oxide, zinc oxide, thin*

oxide and indium oxide.”

The Office Action admits that APAF and Kakuda show all of the elements of the claims except the metal layer formed on an entire surface of the source electrode. Then, the Office Action relies upon Seo for allegedly showing (fig. 8d, 8e) that a source side electrode (7 on the left side) has a metal layer (8) formed on its entire surface. Applicant respectfully disagrees.

The source side electrode (7 on the left side) in Seo cannot correspond to a source electrode in the claimed invention. Referring to figure 8d and line 65 in column 7 to line 7 in column 8 of Seo, a source side electrode (7 on the left side) is a patterned doped semiconductor layer (7). In the disclosure of Seo, after sequentially depositing a semiconductor layer and a doped semiconductor layer on first insulating layer (5), a patterned semiconductor layer (6) and a patterned doped semiconductor layer (7) are photolithographically patterned on first insulating layer 5. Namely, the source side electrode (7) is formed from a doped semiconductor layer. On the contrary, the source electrode in the claimed invention is formed of a transparent conductive material selected from a group including indium-tin-oxide, indium-zinc-oxide, zinc oxide, thin oxide and indium oxide.

If the source side electrode (7) is formed of a transparent conductive material, *which is selected from a group including indium-tin-oxide, indium-zinc-oxide, zinc oxide, thin oxide and indium oxide*, the device of Seo can not be operated. Namely, since the source side electrode (7) of the transparent conductive material directly contacts the patterned semiconductor layer (6), there is a rectifying contact (i.e., rectifying junction), not an ohmic contact between the source side electrode (7) and the patterned semiconductor layer (6). Accordingly, an element, which includes the metal layers (2a and 3a) as a gate electrode, the patterned semiconductor layer (6), the source side electrode (7), and so on, in Seo does not serve as a transistor. Accordingly, Seo

never remedies the deficiency of APAF and Kakuda, i.e., an element of the metal layer formed on an entire surface of the source electrode in the claimed invention.

For at least the above reasons, Applicant respectfully submits that claims 1-14 are neither taught nor suggested by the cited references, whether taken alone or in combination. Thus, Applicant respectfully asserts that the rejections under 35 U.S.C. § 103(a) should be withdrawn because the above-discussed novel combination of features are neither taught nor suggested by any of the cited references.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the Response, the Examiner is invited to contact the Applicant's undersigned representative to expedite prosecution.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,
Morgan, Lewis & Bockius LLP

Dated: August 11, 2010
Customer No. 009629
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Tel: 202-739-3000

By: /Mary Jane Boswell/
Mary Jane Boswell, Reg. No. 33,652